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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,075	02/12/2002	Yoshikazu Yamaguchi	P 290700 D1119	3126
909	7590	11/13/2003	EXAMINER	
PILLSBURY WINTHROP, LLP			BERMAN, SUSAN W	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	

1711  
DATE MAILED: 11/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/073,075	Applicant(s) YAMAGUCHI ET AL.	
	Examiner Susan W Berman	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____.                                   |

*Claim Rejections - 35 USC § 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6 and 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/12942 in view of Li Bassi et al (4,672,079).

WO '942 discloses reactive silica particles treated with an organic compound corresponding to the compound set forth in instant claims 2-4 and compositions comprising the particles. The compositions may comprise polyfunctional (meth)acrylate monomers, such as dipentaerythritol hexa(meth)acrylate (page 27 and Example 8). Photoinitiators are taught on pages 30-31. WO '942 teaches using a photoinitiator that generates activation radicals by radiation, preferably UV light. The photoinitiators disclosed do not include an oligomeric photoinitiator as set forth in the instant claims.

Li Bassi et al teach polymeric or polymerizable aromatic-aliphatic ketones of formula (I), encompassing photoinitiators of the formula set forth in the instant claims, suitable as polymerization initiators for the photopolymerization of ethylenically unsaturated monomers or prepolymers. Li Bassi et al teach that the disclosed photoinitiators have high efficiency in regard to the useful concentration required and to the polymerization rate and have other advantages (column 2, line 57, to column 3, line 2). Li Bassi et al teach that the polymeric photoinitiators can be used with traditional photoinitiators, such as those taught by WO '942 (column 4, lines 60-66).

It would have been obvious to one skilled in the art at the time of the invention to employ the polymeric photoinitiators taught by Li Bassi et al as the photoinitiator in the compositions disclosed by WO '942. Alternatively, It would have been obvious to one skilled in the art at the time of the invention to employ the polymeric photoinitiators taught by Li Bassi et al in combination with the photoinitiators disclosed by WO '942 in the compositions disclosed by WO '942. WO '942 provides motivation by

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teaching that a photoinitiator that generates radicals by radiation is preferred. WO '942 does not limit the photoinitiator to those set forth as examples. Li Bassi et al provide motivation by teaching the advantages of using the polymeric photoinitiators disclosed. One of ordinary skill in the art at the time of the invention would have been motivated to employ the polymeric photoinitiators disclosed by Li Bassi et al by an expectation of taking advantage of the higher polymerization rate than conventional photoinitiators and of obtaining products that do not yellow under UV light or sunlight and other advantages taught by Li Bassi et al.

#### *Response to Arguments*

Applicant has provided Table 2 including the data for Comparative Examples 1-3. It is agreed that the comparative data shows that the examples containing oligomeric radiation polymerization initiator KIP 150 have improved curling properties while maintaining hardness. See Example 1 compared with comparative examples 1 and 2. The data for example 2 compared with comparative example 3 shows an improved pencil hardness for the examples according to the invention probably due to the difference in polymerizable unsaturated group as well as the use of KIP 150.

In any case, the data presented is not considered to be commensurate in scope with the instant claims. There is no evidence of record to show that an improvement in curling properties results when (1) the particles are prepared by bonding with an organic compound other than the compound defined in instant claim 2 wherein the polymerizable group is an acrylate group (2) any known "oligomeric polymerization initiator having recurring units" (are the recurring units monomer units?), as recited in claim 1, is employed (3) a compound having two polymerizable unsaturated groups other than acrylate groups in the molecule is employed. There is no evidence of record to show that an improvement in curling properties results when other kinds of particle, oligomeric polymerization initiator or compounds having at least two polymerizable unsaturated groups are employed. With respect to the "oligomeric polymerization initiator having recurring units", there is no evidence of record to show that an

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improvement in curling properties results wherein the weight average molecular weight is outside the range from 400 to 10,000 or wherein the recurring monomer units containing the photoinitiating groups are other than those shown in instant claims 6 or 9.

Claims combining the limitations set forth in claims 1, 2 and 6 would be favorably considered.

*Conclusion*

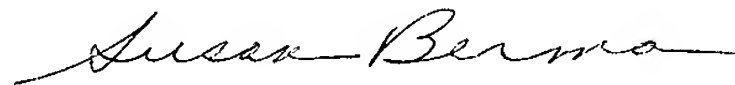
**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman  
Primary Examiner  
Art Unit 1711

SB  
11/6/03